

<b>FORM PTO-1449</b> U.S. Department of Commerce Patent and Trademark Office	Docket No. <b>DIVER1370-7</b>	Serial No.: <del>Unassigned</del> <i>09/866379</i>
	Applicant(s): Jay M. Short et al.	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	Filing Date: <b>May 24, 2001</b>	Group Art Unit: Unassigned <i>652</i>

J0978 U.S. PTO  
 09/866379



### U.S. PATENT DOCUMENTS

EXAM. INITIALS	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE

### FOREIGN PATENT DOCUMENTS

EXAM. INITIALS	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION (YES/NO)

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)


<i>mc</i>	AA	Arnold, "Enzyme engineering reaches the boiling point", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 95, pp. 2035-2036, March 1998
<i>Already Considered</i>	AB	<del>Dassa et al., "The Complete Nucleotide Sequence of the <i>Escherichia coli</i> Gene <i>appA</i> Reveals Significant Homology between pH 2.5 Acid Phosphatase and Glucose-1-Phosphatase", <i>Journal of Bacteriology</i>, Sept. 1990, pp. 5497-5500, Vol. 172, No. 9</del>
	AC	<del>Lori Giver et al., "Directed evolution of a thermostable esterase," <i>Proc. Natl. Acad. Sci. USA</i>, Vol. 95, pp. 12809-12813, October 1998</del> <i>already considered</i>
	AD	<del>R. Greiner et al., "Purification and Characterization of Two Phytases from <i>Escherichia coli</i>", <i>Archives of Biochemistry and Biophysics</i>, Vol. 303, No. 1, May 15, 1993, pp. 107-113</del> <i>already considered</i>
<i>already Considered</i>	AE	<del>L. Jermutus et al., "Structure-based chimeric enzymes as an alternative to directed enzyme evolution: phytase as a test case", <i>J. of Biotechnology</i>, 85 (2001) 15-24</del>

EXAMINER <i>[Signature]</i>	DATE CONSIDERED <i>12/18/02</i>
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Applicant(s): Jay M. Short et al.	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	Filing Date: <b>May 24, 2001</b>	Group Art Unit: Unassigned <i>1652</i>

<i>DR</i>	AF	M. Lehmann et al., "Exchanging the active site between phytases for altering the functional properties of the enzyme," <i>Protein Science</i> , pp. 1866-1872, 2000
<i>DR</i>	AG	M. Lehmann et al., "From DNA sequence to improved functionality: using protein sequence comparisons to rapidly design a thermostable consensus phytase", <i>Protein Engineering</i> , vol. 13, no.1, pp. 49-57, 2000
	AH	<del>M. Lehmann et al., "The consensus concept for thermostability engineering of proteins", <i>Biochimica et Biophysica Acta</i> 1543 (2000) 408-415</del> <i>already considered</i>
<i>DR</i>	AI	E. Rodriguez et al., "Site-Directed Mutagenesis Improves Catalytic Efficiency and Thermostability of <i>Escherichia coli</i> pH 2.5 Acid Phosphatase/Phytase Expressed in <i>Pichia pastoris</i> , <i>Archives of Biochemistry and Biophysics</i> , Vol. 382, No.1, October 1, 2000, pp. 105-112
<i>already considered</i>	AJ	<del>A. Tomshy et al., "Optimization of the catalytic properties of <i>Aspergillus fumigatus</i> phytase based on the three-dimensional structure," <i>Protein Science</i>, 2000, 9, 1304-1311</del>
<i>already considered</i>	AK	<del>C. Vetriani et al., "Protein thermostability above 100°C: A key role for ionic interactions," <i>Proc. Natl. Acad. Sci. USA</i>, Vol. 95, pp. 12300-12305, October 1998</del>

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<b>FORM PTO-1449</b> U.S. Department of Commerce Patent and Trademark Office SEP 13 2002 INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Docket No. <b>DIVER1370-4</b>	Serial No.: <b>09/580,515</b>
JAN 02 2001 RECEIVED		Applicant(s): <b>Short and Kretz</b>	
Filing Date: <b>May 25, 2000</b>		Group Art Unit: <b>1651</b>	

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DR	AA	5,593,963	01/14/97	Van Ooijen et al.			11/2/93

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DR	AC	WO 99/08539	25.02.99	PCT	A23B	7/10	




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DR	AD	Altschul et al., "Basic Local Alignment Search Tool," <i>J. Mol. Biol.</i> <b>215</b> :403-410 (1990)
DR	AE	Dassa et al., "The Complete Nucleotide Sequence of the <i>Escherichia coli</i> Gene <i>appA</i> Reveals Significant Homology between pH 2.5 Acid Phosphatase and Glucose-1-Phosphatase," <i>Journal of Bacteriology</i> <b>172</b> (9):5497-5500 (1990)
DR	AF	Pearson and Lipman, "Improved tools for biological sequence comparison," <i>Proc. Natl. Acad. Sci. USA</i> <b>85</b> :2442-2448 (1988)
DR	AG	Pen et al., "Phytase-containing Transgenic Seeds as a Novel Feed Additive for Improved Phosphorus Utilization," <i>Bio/Technology</i> <b>11</b> (7):811-814 (1993)
DR	AH	Rodriguez et al., "Cloning, Sequencing, and Expression of an <i>Escherichia coli</i> Acid Phosphatase/Phytase Gene ( <i>appA2</i> ) Isolated from Pig Colon," <i>Biochemical and Biophysical Research Communications</i> <b>257</b> :117-123 (1999)

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	AI	J. Rozas and R. Rozas, "DnaSP, DNA sequence polymorphism: an interactive program for estimating population genetics parameters from DNA sequence data," <i>CABIOS</i> 11(6):621-625 (1995)
	AJ	Verwoerd et al., "Phytase-Enriched Transgenic Seeds as a Novel Feed Additive," <i>Med. Fac. Landbouww. Univ. Gent.</i> , 58(4A):1719-1721 (1993)
	AK	G. von Heijne, "A new method for predicting signal sequence cleavage sites," <i>Nucleic Acids Research</i> 14(11):4683-4690 (1986)

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